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Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte MARTIN JAGER

Appeal No. 2001-2538
Application No. 08/894,193

ON BRIEF

Before SCHEINER, MILLS and GRIMES, Administrative Patent Judges.

GRIMES, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 21-38, all of the claims remaining. Claims 21, 27, 32, and 38 are representative and read as follows:

21. A method for visual and sensorial stabilization of a foodstuff composition, said foodstuff composition containing an amino component and a food-preserving amount of sorbic acid or at least one physiologically-acceptable sorbate salt or a combination of sorbic acid and the sorbate salt, which comprises adding a discoloration-inhibiting amount of discoloration inhibitor comprising allantoin to the foodstuff composition.
27. A method as claimed in claim 21, wherein the discoloration inhibitor comprises allantoin and citrate component, wherein the citrate

component is citric acid, a physiologically-acceptable citrate salt, or a combination of citric acid and the citrate salt.

32. A foodstuff composition stabilized against color changes comprising: an amino component; as at least one preservative, a food-preserving amount of sorbic acid or at least one physiologically-acceptable sorbate salt or a combination of sorbic acid and sorbate salt; and, as a discoloration inhibitor, a discoloration-inhibiting amount of allantoin.

38. A cosmetic composition stabilized against discoloration, comprising:

an amino component which accelerates discoloration,

from 0.005 to 5% by weight, calculated as sorbic acid, of sorbic acid, a sorbate salt, or a combination thereof,

from 0.001 to 10% by weight of allantoin, and

from 0.05 to 5% by weight of citric acid, a salt thereof, or a combination thereof.

The examiner relies on the following reference:

Hirohata et al. (Hirohata)

JP 5-339135

Dec. 21, 1993

Claims 21, 27, 32, and 33 stand rejected under 35 U.S.C. § 112, first paragraph, as inadequately described in the specification.

Claims 21-38 stand rejected under 35 U.S.C. § 103 as obvious in view of Hirohata.

We reverse both rejections.

Background

“Sorbic acid (2,4-hexadienoic acid) and its salts . . . have been used worldwide for many years for preserving foodstuffs.” Specification, page 1. “In the solid form, sorbic acid and sorbates are stable. In aqueous solutions, in

foodstuffs and in cosmetic compositions, however, sorbic acid is subject to oxidative influences.” Id., page 2. The oxidation of sorbic acid can produce off-flavors and brown discoloration of food or cosmetic products. See id.

Attempts have been made to prevent sorbate-induced discoloration using, for example, EDTA or citrates. See the specification, page 4. In addition, the specification cites Hirohata as disclosing the use of allantoin to inhibit sorbate-induced discoloration in mouthwashes, toothpastes, and denture-cleaning compositions, but expresses doubt whether this solution would be generally applicable. See pages 4-5. That is, “since they generally comprise no amino components which accelerate discoloration, oral hygiene compositions do not make too high a demand on the browning-inhibiting substance.” Id. See also page 8 (“Amino groups precisely are regarded as an additional ‘risk factor’ with respect to sorbate-induced discolorations.”).

The specification discloses “a method for visual and sensorial stabilization of foodstuffs and cosmetic compositions containing sorbate preservative, which comprises adding allantoin or allantoin and citrates to these products as browning inhibitors.” Page 5. The specification discloses that allantoin inhibits browning even in compositions containing both sorbates and an amino acid. See page 11, lines 10-15 (“As expected, with the addition of an amino acid, for example alanine, the discoloration of the control (without allantoin and citrates) is accelerated, while the protective action of allantoin and the synergistic mixture of allantoin and citrate is documented again (see Table 4).”).

Discussion

The claims are directed to a method of stabilizing food containing sorbic acid and/or a sorbate salt, by adding allantoin, either alone or in combination with citric acid and/or a citrate salt. The claims also encompass food and cosmetic products so treated. The examiner rejected some of the claims as lacking an adequate written description, and rejected all of the claims as obvious over Hirohata.

1. Written description

The examiner rejected claims 21, 27, 32, and 33 under 35 U.S.C. § 112, first paragraph, on the basis that they were not adequately described by the specification. The rejected claims all recite either (a) sorbic acid, a sorbate salt, or a combination of the two, or (b) citric acid, a citrate salt, or a combination of the two. The examiner's rejection is based on the claims' recitation of a combination of sorbic acid and a sorbate salt, or the combination of citric acid and a citrate salt. See the Examiner's Answer, pages 4-5:

The appellant originally claimed a method for visual and sensorial stabilization applied to a foodstuff composition comprising adding sorbate or sorbic acid. . . . The appellant also originally claimed a method for visual and sensorial stabilization applied to a foodstuff composition comprising adding citrate or citric acid. . . . [T]he specification as originally filed does not suggest that appellant had possession of the concept of the invention that is now claimed, a combination of sorbic acid and sorbate, and a combination of citric acid and citrate.

The examiner “bears the initial burden . . . of presenting a prima facie case of unpatentability.’ In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Insofar as the written description requirement is

concerned, that burden is discharged by ‘presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims.’ . . . If . . . the specification contains a description of the claimed invention, albeit not in ipso verbo (in the identical words), then the examiner . . ., in order to meet the burden of proof, must provide reasons why one of ordinary skill in the art would not consider the description sufficient.” In re Alton, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996).

We agree with Appellant that the examiner has not met the initial burden of proof. Appellant points to several passages of the originally filed specification as supporting the disputed limitation, including original claim 2 and page 6, lines 7-10 of the specification. See the Appeal Brief, pages 8-10.

Original claim 2 reads as follows (emphasis added): “2. The method according to claim 1, wherein the foodstuffs and cosmetic compositions containing sorbate preservative comprise the preservative both in the form of sorbic acid and as a physiologically acceptable salt thereof, in particular potassium sorbate or calcium sorbate.” Page 6, lines 7-10 of the specification reads as follows (emphasis added): “If citrates (for example citric acid or disodium citrate) are additionally employed as complexing agents, sorbate-induced discolorations can be prevented virtually entirely.” We also note page 5, lines 30-33, which reads (emphasis added): “The foodstuffs and cosmetic compositions containing sorbate preservative can comprise the preservative here

both in the form of free sorbic acid and as the physiologically acceptable salts thereof.”

The examiner has not adequately explained why these passages would not have been read, by a person skilled in the art of food chemistry, to support the claim limitation allowing the use of a combination of sorbic acid and a sorbate salt, or a combination of citric acid and a citrate salt. The rejection under 35 U.S.C. § 112, first paragraph, is reversed.

2. Obviousness

The examiner rejected all of claims 21-38 as obvious in view of Hirohata. The examiner characterized Hirohata as

describ[ing] the method for visual and sensorial stabilization of a cosmetic composition containing sorbic acid or its salt, and allantoin for use as a browning inhibitor. He also describes the addition of a citrate. . . . Optimization of amounts is considered within the skill of the artisan, absent evidence to the contrary.

Examiner’s Answer, page 5. The examiner concluded that

Hirohata describes all of the limitations of appellant[']s claims except for the presentation of the sorbate concentration calculated as a sorbic acid. . . .

. . .

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the composition of Hirohata to meet appellant[']s composition as claimed. The motivation for using Hirohata is that he provides similar active ingredients, sorbates, citrates and allantoin in a cosmetic composition for the same purpose of inhibiting discoloration. The reasonably expected result is an improved method of inhibiting discolorations that is effective in guarding against bacteria as well as enhancing the cosmetic appearance of the dentifrice.

Id., page 6.

Appellant argues that the examiner has not made out a prima facie case of obviousness. Appeal Brief, pages 11-14. Appellant also argues that the degree of synergism observed between allantoin and citrate is unexpectedly great. Appeal Brief, pages 14-15.

“In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant.” In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). The prima facie case must account for all the limitations of the claims. See In re Angstadt, 537 F.2d 498, 501, 190 USPQ 214, 217 (CCPA 1976) (“[W]e must give effect to all claim limitations.” (emphasis in original)).

Here, the examiner has not shown that the prior art would have taught or suggested all of the limitations of the instant claims. First, the examiner concedes that the product disclosed by Hirohata is not a “foodstuff composition,” as required by most of the claims. Rather, Hirohata discloses compositions for cleaning dentures. The examiner provides no explanation of how this admittedly “cosmetic composition,” Examiner’s Answer, page 5, would have suggested the “foodstuff compositions” and related methods defined by appealed claims 21-37.

Claim 38 is the only claim on appeal that is directed to a “cosmetic composition.” That claim, however, also contains a limitation that was not addressed in the examiner’s rejection. Claim 38 defines a cosmetic composition comprising, inter alia, “an amino component which accelerates discoloration.” The instant specification states that oral hygiene compositions like those

disclosed by Hirohata “generally contain no amino components that accelerate discoloration.” Page 5. The examiner has pointed to no evidence to the contrary, nor provided any evidence or scientific reasoning to show that such compositions would have been suggested by Hirohata’s disclosure.

Claims 21-37 also require that the claimed foodstuff compositions comprise “an amino component.” The examiner argues that this claim limitation reads on the allantoin present in all of Hirohata’s disclosed oral hygiene compositions, as well as the EDTA present in the exemplary mouthwash composition shown in Table 1.¹ We disagree with the examiner’s claim construction. Although claims are given their broadest reasonable interpretation during examination, a construction that vitiates an express limitation is unreasonably broad. See Texas Instruments, Inc. v. International Trade Comm., 988 F.2d 1165, 1171, 26 USPQ2d 1018, 1023 (Fed. Cir. 1993) (“[T]o construe the claims in the manner suggested by TI would read an express limitation out of the claims. This we will not do.”).

Here, the claims define a method that comprises adding allantoin to a “foodstuff composition containing an amino component.” It is true that allantoin contains three secondary amino groups and one primary amino group. Specification, page 8. However, if “an amino component” were construed to include the allantoin added to the claimed composition, the limitation requiring

¹ The examiner also argues that “amino acids are present in a wide variety of foodstuffs so that the leftovers and contaminants from eating, as shown on p. 4 of Hirohata, would reasonably be expected [to] remain in the oral cavity when sorbate and allantoin are administered.” Examiner’s Answer, page 8. We need not dwell on this line of argument; Appellant’s Reply Brief (pages 5-7) ably points out the deficiencies in the examiner’s reasoning.

that the composition contain an amino component would be rendered meaningless. Such a construction is unreasonably broad and we decline to adopt it.

The examiner's argument that EDTA should be considered an "amino component" is a closer call, but ultimately unpersuasive. In the examiner's favor, EDTA (ethylene diamine tetraacetic acid), comprises amino groups and there is nothing in the claim language to prevent construing "amino component" to include EDTA. In addition, the specification does not provide an express definition of "amino component" that would exclude EDTA. See Optical Disc Corp. v. Del Mar Avionics, 208 F.3d 1324, 1334, 54 USPQ2d 1289, 1295 (Fed. Cir. 2000) ("Without evidence in the patent specification of an express intent to impart a novel meaning to a claim term, the term takes on its ordinary meaning."). The ordinary meaning of "amino component" would seem to encompass all amines, not just primary and secondary amines.

Appellant, however, argues that the "amino component" recited in the claims refers to primary or secondary amino groups.² See the Appeal Brief, page 11. In Appellant's favor, the specification emphasizes the interactions between allantoin and primary or secondary amino groups. See, e.g., page 2 ("[A]ldehydes and ketones . . . can be formed by oxidative cleavage of the double bonds [of sorbic acid]. Polymerization products of these aldehydes, like the reaction products of these aldehydes with amino acids or other primary and

² The amino groups in EDTA, by contrast, are tertiary amino groups. See the Appeal Brief, page 12.

secondary amino groups, can also be responsible for color changes.”); page 5 (“[D]egradation products of sorbic acid formed oxidatively can react to a particular extent with foodstuff constituents of high nutritional physiology value, such as amino acids.”); and page 8 (“The fact that allantoin, although it contains three secondary amino groups and one primary amino group, is capable of preventing sorbate-induced discolorations in cosmetic compositions and foodstuffs seems particularly surprising. Amino groups are regarded as an additional ‘risk factor’ with respect to sorbate-induced discolorations.”).

We find it unnecessary to precisely construe this claim term, however, because the rejection must be reversed even under the examiner’s claim construction. The only composition disclosed by Hirohata that contains EDTA is the exemplary mouthwash composition shown on page 11 of the English-language translation. See Table 1. The examiner does not dispute that the disclosed mouthwash is not a “foodstuff composition” as required by claims 21-37. See the Examiner’s Answer, page 5: “Hirohata describes the method for visual and sensorial stabilization of a cosmetic composition containing sorbic acid” (emphasis added). Thus, Hirohata does not inherently meet the limitations of the claims, and the examiner has provided no clear rationale why Hirohata would have led a person skilled in the art to modify an EDTA- and sorbate-containing foodstuff composition by adding a discoloration-inhibiting amount of allantoin to it.

Nor does the mouthwash composition meet the limitations of claim 38. Even if a mouthwash is a cosmetic composition, the evidence shows that EDTA

is not an “amino component which accelerates discoloration,” as required by the claim. Rather, EDTA inhibits sorbate-induced discoloration. See the specification, page 4 (“[C]omplexing agents (EDTA or citrates) . . . slow down sorbate-induced brown discolorations by complexing pro-oxidative metal ions.”).

Since we conclude that the examiner has not made out a prima facie case of obviousness, we need not address Appellant’s allegation of unexpected results.

Summary

The claimed invention is adequately described by the specification and would not have been rendered obvious by Hirohata. We therefore reverse the rejections under 35 U.S.C. §§ 103 and 112, first paragraph.

REVERSED

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